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EXAMINER	
LETT, THOMAS J	

ART UNIT	PAPER NUMBER
2625	

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/934,855	TATEYAMA, JIRO	
	Examiner	Art Unit	
	Thomas J. Lett	2625	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *27 March 2006*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *19-39* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *19-39* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *23 August 2001* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.

5)☐ Notice of Informal Patent Application (PTO-152)

6)☐ Other: _____.

DETAILED ACTION

Response to Arguments

1. Applicant's arguments filed 27 March 2006 have been fully considered but they are not persuasive. The prior art of Yan et al is relied upon for its ability to share/distribute programs between the host computer and other peripherals. If a device is not capable of executing a certain processing, the necessary applet or application is downloaded to the peripheral that needs the software in order to execute a process.

Yan et al fail to teach of determining the optimal device to execute a process based on execution time For this reason, the prior art of Vazquez et al is combined because it evaluates the performance of an algorithm (program) to determine if said algorithm is fast enough to perform a certain image processing on a sample image (see at least steps 306 and 308 of Fig. 3). The motivation to combine would be to execute processing much quicker in the distributed computer system of Yan et al by sending the image to the device with the quicker algorithm as measured by Vazquez et al.

Claim Rejections - 35 USC § 101

35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

2. Claim 39 is rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. The control program claimed is merely a set of instructions per se. Since the control program could merely be a set of instructions

embodied on a sheet of paper (which can act as a recording medium), the claimed subject matter is non-statutory. See MPEP § 2106 IV.B.1.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3. Claims 19-39 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yan et al (USPN 6,003,065) in view of Vazquez et al (USPN 6,931,633 B1).

Regarding claim 19, Yan et al disclose an image processing system having plural devices (computer network 100, consisting of image devices), including a device capable of executing predetermined image processing (host computer 102A, see at least Fig. 2), interconnected via a serial bus (peripheral devices of the computer network 100 can interface (via interfaces 211 and 212) using a serial interface, col. 8, lines 16-25),

wherein a processing program for execution of said image processing is downloaded (to drive a peripheral device, the application need only download the necessary application or applet into the virtual machine instruction processor located on the peripheral device from a host computer, col. 10, lines 42-45) from said device capable of executing predetermined image processing to a device, which does not have a function of executing said image processing among said plural devices.

Yan et al do not disclose wherein processing performance information indicating performance of executing said image processing based on the downloaded processing program is obtained from each of said plural devices, and

wherein an executing device to execute said image processing is determined from said plural devices based on said processing performance information and time to be taken for transferring data to each device.

Vazquez et al teach of evaluating the performance of image processing algorithms wherein the execution times for any script/algorithm is determined for the hardware/software events as applied to an image (col. 9, lines 4-34, col. 13, lines 56-67, and see Figs. 12-14). Examiner notes that it would be obvious to one skilled in the art to factor in the "hardware/software event" of transmission time when evaluating a process that uses a communication or transit system.

Regarding claim 20, Yan et al do not disclose that the image processing system according to claim 19, wherein said processing performance information is obtained at each of plural processing steps constructing said image processing.

Vazquez et al teach of obtaining processing performance times at each step of image processing, see Fig. 14 and col. 14, lines 1-3.

Yan et al and Vazquez et al are analogous art because they are from the similar problem solving area of image processing performance. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to add the algorithm evaluation feature of Vazquez et al to the hardware system of Yan et al in order to

obtain capability of determining the performance parameters of processing an image. The motivation for doing so would be to determine image processing speed.

Regarding claim 21, Yan et al do not disclose that the image processing system according to claim 20, wherein said processing performance information is obtained by measuring processing time upon execution of said image processing on predetermined sample image data.

Vazquez et al teach of obtaining processing performance times at each step of image processing of image data selected by a user, see Fig. 14 and col. 14, lines 1-3.

Yan et al and Vazquez et al are analogous art because they are from the similar problem solving area of image processing performance. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to add the algorithm evaluation feature of Vazquez et al to the hardware system of Yan et al in order to obtain capability of determining the performance parameters of processing an image. The motivation for doing so would be to determine image processing speed.

Regarding claim 22, Yan et al do not disclose that the image processing system according to claim 20, wherein said executing device is determined at each of plural processing steps constructing said image processing based on said processing performance information.

Vazquez et al teach of obtaining processing performance times at each step of image processing, see Fig. 14 and col. 14, lines 1-3.

Yan et al and Vazquez et al are analogous art because they are from the similar problem solving area of image processing performance. At the time of the invention, it

would have been obvious to a person of ordinary skill in the art to add the algorithm evaluation feature of Vazquez et al to the hardware system of Yan et al in order to obtain capability of determining the performance parameters of processing an image. The motivation for doing so would be to determine the speed of image processing.

Regarding claim 23, Yan et al disclose that said plural devices include an image supply device (scanner 102F, camera 102C) and an image printing device (printer 102B).

Regarding claim 24, Yan et al disclose said plural devices include a digital broadcast tuner (hdtv television 102E, Examiner notes that it is well-known that televisions contain built-in tuners or decoders), and wherein the processing program for execution of said image processing is downloaded to said tuner (the application need only download the necessary application or applet into the virtual machine instruction processor located on the peripheral device from a host computer, col. 10, lines 42-45).

Regarding claim 25, Yan et al disclose an image processing system according to claim 9, wherein said tuner is a set top box (hdtv television 102E, Examiner notes that it is well-known in the art that televisions contain built-in tuners or decoders. These tuners could be built-in set-top boxes).

Regarding claim 26, Yan et al do not disclose that said image processing is processing of transforming image data to print data.

Vazquez et al teach that each particular image processing function may have associated input and/or output parameters or settings, col. 15, lines 27-29.

Yan et al and Vazquez et al are analogous art because they are from the similar problem solving area of image processing performance. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to add the algorithm evaluation feature of Vazquez et al to the hardware system of Yan et al in order to obtain the output parameter of printing. The motivation for doing so would be to include printing as a part of processing the image.

Claim 27, a method claim, is rejected for the same reason as claim 19.

Claim 28, a method claim, is rejected for the same reason as claim 20.

Claim 29, a method claim, is rejected for the same reason as claim 21.

Claim 30, a method claim, is rejected for the same reason as claim 22.

Regarding claim 31, Yan et al disclose an image processing apparatus, connected to plural devices via a serial bus (peripheral devices of the computer network 100 can interface (via interfaces 211 and 212) using a serial interface, col. 8, lines 16-25), capable of executing of predetermined image processing (host computer 102A, see at least Fig. 2), wherein a processing program for execution of said image processing is downloaded to a device which does not have a function of executing said image processing (to drive a peripheral device, the application need only download the necessary application or applet into the virtual machine instruction processor located on the peripheral device from a host computer, col. 10, lines 42-45), among said plural devices.

Yan et al do not disclose wherein processing performance information indicating performance of executing said image processing upon using the downloaded

processing program is obtained from each of said plural devices and said apparatus, and

wherein an executing device to execute said image processing is determined from said plural devices and said apparatus based on said processing performance information and time to be taken for transferring data to each device.

Vazquez et al teach of evaluating the performance of image processing algorithms wherein the execution times for any script/algorithm is determined for the hardware/software events as applied to an image (col. 9, lines 4-34, col. 13, lines 56-67, and see Figs. 12-14). Examiner further notes that it would be obvious to one skilled in the art to factor in the "hardware/software event" of transmission time when evaluating a process that uses a communication or transit system.

Regarding claim 32, Yan et al do not disclose that the image processing system according to claim 31, wherein said processing performance information is obtained at each of plural processing steps constructing said image processing.

Vazquez et al teach of obtaining processing performance times at each step of image processing, see Fig. 14 and col. 14, lines 1-3.

Yan et al and Vazquez et al are analogous art because they are from the similar problem solving area of image processing performance. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to add the algorithm evaluation feature of Vazquez et al to the hardware system of Yan et al in order to obtain capability of determining the performance parameters of processing an image. The motivation for doing so would be to determine image processing speed.

Regarding claim 33, Yan et al do not disclose that the image processing system according to claim 32, wherein said processing performance information is obtained by measuring processing time upon execution of said image processing on predetermined sample image data.

Vazquez et al teach of obtaining processing performance times at each step of image processing of image data selected by a user, see Fig. 14 and col. 14, lines 1-3.

Yan et al and Vazquez et al are analogous art because they are from the similar problem solving area of image processing performance. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to add the algorithm evaluation feature of Vazquez et al to the hardware system of Yan et al in order to obtain capability of determining the performance parameters of processing an image. The motivation for doing so would be to determine image processing speed.

Regarding claim 34, Yan et al do not disclose that the image processing system according to claim 31, wherein said executing device is determined at each of plural processing steps constructing said image processing based on said processing performance information.

Vazquez et al teach of obtaining processing performance times at each step of image processing, see Fig. 14 and col. 14, lines 1-3.

Yan et al and Vazquez et al are analogous art because they are from the similar problem solving area of image processing performance. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to add the algorithm evaluation feature of Vazquez et al to the hardware system of Yan et al in order to

obtain capability of determining the performance parameters of processing an image. The motivation for doing so would be to determine the speed of image processing.

Regarding claim 35, Yan et al disclose an image processing apparatus connected to plural devices including a device capable of executing predetermined image processing (host computer 102A, see at least Fig. 2) interconnected via a serial bus (peripheral devices of the computer network 100 can interface (via interfaces 211 and 212) using a serial interface, col. 8, lines 16-25), said apparatus not having a function of executing said image processing,

wherein a processing program for execution of said image processing is downloaded (to drive a peripheral device, the application need only download the necessary application or applet into the virtual machine instruction processor located on the peripheral device from a host computer, col. 10, lines 42-45) from said device capable of executing said image processing.

Yan et al do not disclose wherein processing performance information indicating performance of executing said image processing upon using the downloaded processing program is obtained from each of said plural devices and said apparatus, and

wherein an executing device to execute said image processing is determined from said plural devices and said apparatus based on said processing performance information and time to be taken for transferring data to each device.

Vazquez et al teach of evaluating the performance of image processing algorithms wherein the execution times for any script/algorithm is determined for the

hardware/software events as applied to an image (col. 9, lines 4-34, col. 13, lines 56-67, and see Figs. 12-14). Examiner further notes that it would be obvious to one skilled in the art to factor in the "hardware/software event" of transmission time when evaluating a process that uses a communication or transit system.

Regarding claim 36, Yan et al do not disclose that the image processing system according to claim 35, wherein said processing performance information is obtained at each of plural processing steps constructing said image processing.

Vazquez et al teach of obtaining processing performance times at each step of image processing, see Fig. 14 and col. 14, lines 1-3.

Yan et al and Vazquez et al are analogous art because they are from the similar problem solving area of image processing performance. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to add the algorithm evaluation feature of Vazquez et al to the hardware system of Yan et al in order to obtain capability of determining the performance parameters of processing an image. The motivation for doing so would be to determine image processing speed.

Regarding claim 37, Yan et al do not disclose that the image processing system according to claim 36, wherein said processing performance information is obtained by measuring processing time upon execution of said image processing on predetermined sample image data.

Vazquez et al teach of obtaining processing performance times at each step of image processing of image data selected by a user, see Fig. 14 and col. 14, lines 1-3.

Yan et al and Vazquez et al are analogous art because they are from the similar problem solving area of image processing performance. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to add the algorithm evaluation feature of Vazquez et al to the hardware system of Yan et al in order to obtain capability of determining the performance parameters of processing an image. The motivation for doing so would be to determine image processing speed.

Regarding claim 38, Yan et al do not disclose that the image processing system according to claim 35, wherein said executing device is determined at each of plural processing steps constructing said image processing based on said processing performance information.

Vazquez et al teach of obtaining processing performance times at each step of image processing, see Fig. 14 and col. 14, lines 1-3.

Yan et al and Vazquez et al are analogous art because they are from the similar problem solving area of image processing performance. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to add the algorithm evaluation feature of Vazquez et al to the hardware system of Yan et al in order to obtain capability of determining the performance parameters of processing an image. The motivation for doing so would be to determine the speed of image processing.

Claim 39, a control program claim, is rejected for the same reason as claim 19.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thomas J. Lett whose telephone number is (571) 272-7464. The examiner can normally be reached on 7-3:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David K. Moore can be reached on (571) 272-7437. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

TJL

KING Y. POON
PRIMARY EXAMINER